

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

1-26. (canceled)

27. (currently amended) ~~The method according to claim 24, further comprising:~~ A method of damping vibrations of a wing of an aircraft, the aircraft including a control system, a movable structure operatively connected to the wing, and an actuator operatively coupled to the structure to move the structure in response to a command signal generated by the control system, the method comprising:
processing a vibration signal representative of a vibration of the wing to obtain a vibration canceling signal, the processing performed independent of the control system in a vibration canceling circuit mechanically mounted on the actuator, the vibration canceling circuit including a vibration sensor that provides the vibration signal;
providing the command signal from the control system to the vibration canceling circuit;
in the vibration canceling circuit, superimposing the vibration canceling signal on the provided command signal to generate a resultant driver signal;
operating the actuator with the resultant driver signal to cycle the structure to reduce the vibration of the wing;
filtering, in the canceling circuit, the vibration signal from a position signal representative of a position of the actuator; and

inputting the filtered position signal from the canceling circuit to the control system.

28-45. (canceled)

46. (currently amended) ~~The method of claim 43, further comprising~~
A method of damping vibrations of a wing of an aircraft, the aircraft including a control system, a movable structure operatively connected to the wing, and an actuator operatively coupled to the structure to move the structure in response to a command signal generated by the control system, the method comprising:

mechanically mounting a housing of a vibration canceling circuit on the actuator and electrically interposing the canceling circuit between the actuator and the control system;

rigidly coupling a vibration sensor to the actuator to provide a vibration signal in the canceling circuit representative of a vibration of the wing;

configuring the canceling circuit to use the provided vibration signal to produce a vibration canceling signal and to superimpose the vibration canceling signal as a ripple on the command signal from the control system to generate a resultant driver signal; and operating the actuator using the resultant driver signal;

the method further comprising configuring the vibration canceling circuit to filter the vibration signal from a position signal representative of a position of the actuator and to input the filtered position signal to the control system.

47-51. (canceled)

52. (currently amended) ~~The method of claim 50,~~ A method of damping vibrations of a wing of an aircraft, the aircraft including a control system, a movable structure operatively connected to the wing, and an actuator operatively coupled to the structure to move the structure in response to a command signal generated by the control system, the method comprising:

- receiving from a vibration sensor a vibration signal representative of a vibration of the wing;
- inverting the vibration signal and superimposing the inverted signal as a ripple on the command signal to obtain a driver signal, the ripple having a frequency higher than the operating frequency of the command signal; and
- providing the driver signal to the actuator;
- said method performed by a vibration canceling circuit mechanically mounted on the actuator and electrically interposed between the actuator and the control system;
- the method further comprising:
 - filtering the vibration signal from a position signal representative of a position of the actuator; and
 - inputting the filtered position signal to the control system;
 - said filtering and inputting performed by the vibration canceling circuit.

53. (previously presented) The method of claim 52, wherein the filtering is performed using a difference amplifier of the vibration canceling circuit.

54-55. (canceled)